

REJECTIONS:

The Drawings were objected to for not designating the material shown in Figs. 1, 2, and 4 as "Prior Art", but otherwise approved. Correction was required.

Claims 1 - 3 and 6 - 12 were rejected under 35 U.S.C. § 102(e) as anticipated by the reference HONKASALO ET AL (US 5,995,496).

Claims 4 was rejected under 35 U.S.C. § 103(a) as obvious and unpatentable over the reference HONKASALO ET AL (US 5,995,496) in view of the HAMALAINEN ET AL (US 6,359,904) reference, and Claim 5 was rejected on the same grounds further in view of the TURINA (US 6,031,832) reference.

REPLY:

The Drawings have accordingly been amended to include the legend "PRIOR ART" where appropriate, and copies of the amended drawing Figs. 1, 2, and 4, with the amendments indicated in red thereon are attached for the Examiner's consideration and approval.

Independent Claims 1 and 8 - 12 have been amended to emphasize the fact that it is the blocks of the downlink data transmission that contain information about their own transmission power, and they and the dependent claims have been amended to improve the form of their language to better conform to U.S. practice.

Turning to the prior art rejections, Applicant firstly notes that the disclosure of the HONKASALO reference mentions in Column 8, at lines 10 to 15, that the base station **informs** the terminal device (mobile station) about the measured quality level of the bursts received by the base station from the terminal device, i.e., about the **quality level of the uplink data transmission** from the terminal device. The **information** about the actual quality level is transmitted in the **control messages** of the **downlink data transmission** from the base station to the terminal device. In practice, the quality level of the bursts expresses whether packets are received or not by the base station. The terminal device then tries to correct its transmitter's **transmission** power level and the goal is to set it at a quality level that is not too high nor too low (i.e., closed-loop control, "Continuous" state) as explained in Column 8, at lines 25 to 43.

Based on this disclosure, it should be understood that the method taught in HONKASALO does not relate to and is not pertinent to the problem dealt with and the solution provided by the Applicant's invention. The purpose of the Applicant's invention is not to set the transmission power of the terminal device (mobile station) to the correct level for uplink data transmission to the base station, but rather to inform the terminal device about the transmission power actually being used by the base station while sending the packet of the downlink data transmission. The goal is to enable the terminal device to set the parameters of its receiver, i.e., the reference level of the receiver of the terminal device, so that the terminal device will be ready to receive all the packets, in a more predictable manner. There is no need to send any feedback information from the base station to the terminal device, or vice versa, and the terminal device has the capability, e.g., using a known level, of deducing how to set its receiver parameters independently without the instructions of the base station. In contrast, the idea of the HONKASALO teaching is to set the transmission power of the terminal device to a desired level based on feedback. With Applicant's invention, there is neither feedback nor a requirement to set the transmission power of the terminal device to any particular level and the base station chooses the transmission power it uses independently.

Therefore, the HONKASALO reference does not teach or suggest the method of Claim 1, or the communication system of Claim 8, or the wireless communication device of Claim 9, as presently defined in this application. Again, HONKASALO sets the transmission power of the terminal device to a desired level based on feedback, but with Applicant's invention there is no feedback or any requirement to set the transmission power of the terminal device or the base station to any particular level, the terminal device receives information in the downlink data transmission about the transmission power actually being used by the base station while the packet of the downlink data transmission is being transmitted, which information is used to set the reference level of the terminal device receiver, so that the terminal device will be ready to receive all the packets.

Regarding the HAMALAINEN reference, it does not appear to teach the use of the RLC block to indicate the used transmission power level,

but rather discloses (Col. 3, lines 65 to 67) a PC (Power Control) field containing information for the terminal device so that the base station may command the terminal device to change its transmission power level. This, along with HONKASALO, teaches nothing of pertinence with regard to Applicant's invention, wherein, as noted, the blocks of the downlink data transmission contain information about their own transmission power for use by the terminal device in setting its own appropriate reception parameters.

Similarly, the TURINA reference contains no teaching that could be in any way combined with the teachings of HONKASALO and HAMALAINEN to suggest to or enable one of skill in the art to achieve Applicant's invention as now defined in the claims.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance of this case is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicant's attorney at the telephone number indicated below.

It is also respectfully requested that the amendments to the drawings indicated in red on the attached copies thereof be approved by the Examiner and corrected formal copies will be submitted upon allowance of the case.

No further fee is believed to be due for the entry of this Amendment, however, if some such fee should be needed, the Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,

Thomas P. Dowd  
Thomas P. Dowd

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Date

Reg. No. 24,586

Perman & Green, LLP  
425 Post Road  
Fairfield, CT 06430  
Customer No.: 2512

Tel. (203) 259-1800 X113  
Fax. (203) 255-5170

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Person Making Deposit

MARKED-UP CLAIMS:

1. (Amended) A method for controlling the operation of a mobile station (MS) in a packet switched communication network [(20)] based on a cellular network, which communication network [(20)] is arranged to transfer information using downlink or uplink data transmission between a base station (BTS) and at least one mobile station (MS) by means of a radio channel, [wherein to transfer information,] comprising the steps of:

using a transmission power on a set level [is used] on the radio channel to transfer information; [, and wherein]

transmitting information that is divided into successive blocks [(10, B0-B11)] of the downlink data transmission [is transmitted] from the base station (BTS) to the mobile station (MS) on the radio channel; [, characterized in that]

and wherein one of said blocks [(10, B0-B11)] comprises information (PR) on the transmission power level of any block [(10, B0-B11)] of the downlink data transmission.

2. (Amended) The method according to claim 1, [characterized in that] wherein said one block [(10, B0-B11)] comprises information (PR) on the transmission power level of another block [(10, 80-811)] to be transmitted next.

3. (Amended) The method according to claim 1, [characterized in that] wherein said one block [(10, B0-B11)] comprises information

(PR) on the transmission power level of said one block [(10, B0-B11)].

4. (Amended) The method according to claim 1, [characterized in that] wherein an RLC block [(10, B0-B1 1)] according to the GPRS system is used as said one block [(10, B0-B11)], and [that] information (PR) on the transmission power level is transmitted by means of an MAC header in the RLC block [(10, B0-B11)].

5. (Amended) The method according to claim 4, [characterized in that] wherein the transmission power level (PR) is indicated by means of bits [(1-8)] contained in an octet [(Octet 1-M)] of said MAC header, and at least some of the bits being arranged for an TFI field (TFI) in a way known as such.

6. (Amended) The method according to claim 1, wherein [characterized in that] the transmission power level is indicated as a difference (PR) with respect to a known reference level.

7. (Amended) The method according to claim 6, [characterized in that] wherein said known reference level used is a BCCH channel according to the GPRS system.

8. (Amended) A communication system for implementing packet switched data transmission based on a cellular network, which communication system [(20)] is arranged to transmit information using downlink or uplink data transmission between a base station (BTS) and at least one mobile station (MS) by means of a radio channel, [wherein] comprising:

means for arranging data transmission on the radio channel [is

arranged] to take place with a transmission power on a set level, and [wherein]

means for arranging the radio channel [is arranged] to transmit information that is divided into successive blocks [(10, B0-B11)] of the downlink data transmission, from the base station (BTS) to the mobile station (MS), [characterized in that] and

means for also arranging the communication system [(20) is also arranged] to transmit one of said blocks [(10, B0-B11)] containing information (PR) on the transmission power level of any block [(10, B0-B11)] of the downlink data transmission, via a radio channel.

9. (Amended) A wireless communication device, arranged to function in a communication system, which communication system is arranged to implement packet switched data transmission based on a cellular network, and which communication system [(20)] is arranged to transmit information using downlink or uplink data transmission between a base station (BTS) and [at least one] said wireless communication device (MS) by means of a radio channel, [wherein] comprising:

means for arranging data transmission on the radio channel [is arranged] to take place with a transmission power on a set level, and [wherein]

means for arranging the radio channel [is arranged] to transmit information that is divided into successive blocks [(10, B0-B11)] of the downlink data transmission, from the base

station (BTS) to the wireless communication device (MS), and  
[characterized in that]

means in the wireless communication device (MS) [is also] arranged to receive one of said blocks [(10, B0-B11)] transmitted by the base station (BTS) on the radio channel, which one block [(10, B0-B11)] contains information (PR) on the transmission power level of any block [(10, B0-B11)] of the downlink data transmission.

10. (Amended) A method for controlling the function of a mobile station (MS) in a packet switched communication network [(20)] based on a cellular network, which communication network [(20)] is arranged to transfer information using downlink or uplink data transmission between a base station (BTS) and at least one mobile station (MS) by means of a radio channel, [wherein] comprising the steps of:

using [to transfer information,] a transmission power of a set level [is used] on the radio channel to transfer information, [wherein]

transmitting information that is divided into successive blocks [(10, B0-B11)] of the downlink data transmission [is transmitted] from the base station to the mobile station via a radio channel, [characterized in that] and

transmitting a block [(10, B0-B11)] of the downlink data transmission that is transmitted repeatedly and at fixed intervals, [is transmitted] with a fixed transmission power known by said mobile station, in order to establish a reference

level.

11. (Amended) A communication system for implementing packet switched data transmission based on a cellular network, which communication system [(20)] is arranged to transmit information using downlink or uplink data transmission between a base station (BTS) and at least one mobile station (MS) by means of a radio channel, [wherein] comprising the steps of:

means for arranging the information transmission on the radio channel [is arranged] to occur with a transmission power on a set level, [and which]

means for arranging said radio channel [is arranged] to transmit information that is divided into successive blocks [(10, B0-B11)] of the downlink data transmission, from the base station (BTS) to the mobile station (MS), [characterized in that] and

means for also arranging the communication system [(20)] is also arranged] to transmit, at a fixed transmission power known by said mobile station, a block [(10, B0-B11)] of the downlink data transmission that is transmitted repeatedly and at fixed intervals, to establish a reference level and control the mobile station (MS).

12. (Amended) A wireless communication device, arranged to function in [the communication system, which] a communication system [is] arranged for implementing packet switched data transmission based on a cellular network, and which communication system [(20)] is arranged to transmit information using downlink or uplink data transmission between a base station (BTS) and [at least

one] said wireless communication device (MS) by means of a radio channel, wherein data transmission on the radio channel is arranged to take place with a transmission power on a set level, and which radio channel is arranged to transmit information that is divided into successive blocks [(10, 80-811)] of the downlink data transmission, from the base station (BTS) to the wireless communication device (MS), [characterized in that] and wherein the wireless communication device (MS) is also arranged to receive a block [(10, 80-811)] of the downlink data transmission that is transmitted repeatedly and at fixed intervals from the base station (BTS) with a fixed transmission power known by said mobile station, to establish a reference level for the wireless communication device (MS) and to control its function.